

**Abstract of the Disclosure**

A programmable/controllable anode and related methods of operation. An anode to be used with a metal deposition system containing a substrate acting as a cathode.

- 5 The anode includes a plurality of anode segments and an electrical source. The electrical source is coupled to each of the anode segments. In another aspect, the method comprises applying electrical voltage/current to one of said plurality of anode segments. The method continues by waiting for a prescribed duration, and then applying electrical voltage/current to another one of said plurality of anode segments. Another aspect
- 10 comprises first sensing the electric field generated by the anode. The method finishes by controlling the electricity supplied between different ones of the anode segments to provide a uniform electric field.

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